

## Review of the Richmond-San Pablo Community Air Monitoring Plan

This is CARB's review of the July 2020 draft Richmond-San Pablo community air monitoring plan (CAMP). This review serves as a check to ensure the CAMP meets the intent of the criteria found in the 14 element checklist from Appendix E of the CARB Community Air Protection Blueprint (Blueprint). We evaluate all AB 617 monitoring plans for consistency with this guidance document. However, CARB does not formally approve community air monitoring plans developed under AB 617.

Our review here focuses on the main Community Air Monitoring Plan document, along with the Air Toxics Monitoring Project (Appendix G) that the District is responsible for drafting and implementing. At this time, Appendices C, D, and E related to the initial monitoring projects (Aclima, Groundwork, PSE) have not been formally reviewed by CARB, and Appendix C is still undergoing revisions. We will provide a similar level of review for the remaining Appendices in standalone documents. We intend to complete our review of Appendices D and E by early August and will begin our review of Appendix C upon receipt of the final document.

This document summarizes the Richmond-San Pablo CAMP and provides broad observations followed by comments pertaining to each element as part of the checklist from Appendix E. CARB staff have worked with District staff to review the plan throughout the development process. The District has made continuous improvements to incorporate the elements and recommendations of Appendix E.

Overall, this is a high quality CAMP that meets all criteria for the 14 elements laid out in the Blueprint. The CAMP begins by summarizing the rigorous process the District followed to form a Steering Committee, from establishing a Community Design Team to building a Steering Committee of people who represent a wide range of organizations and sectors. The CAMP sufficiently captures the Steering Committee's level of involvement throughout the process. The District's AB 617 Richmond-San Pablo website provides a surplus of material from each steering committee meeting and is useful for those seeking even more detailed information than what is provided in the main CAMP document and Appendix A.

The Steering Committee selected 3 initial monitoring projects led by 3 separate groups (Aclima, Groundwork Richmond, and Physicians, Scientists and Engineers for Healthy Energy) that focus on evaluating the variability of air pollution across neighborhoods and providing real-time data to the public. These initial projects were used to meet the July 1, 2019 deployment deadline required by statute. The Steering Committee then prioritized their specific air pollution concerns for the District to provide options for additional monitoring projects. The Steering Committee voted to move forward with a project to measure air toxics in the Richmond San-Pablo area using the District's monitoring van.

The full CAMP combines 4 monitoring plans into one. The first 3 Blueprint elements geared toward determining why air monitoring should be conducted are thoroughly described in Chapters 1-4 of the CAMP. Summaries of the initial monitoring projects are available in Chapter 5, along with type of monitoring and what they measure. Providing an overarching timeline with benchmarks and project duration could help to integrate each of the separate monitoring projects. Appendices C, D, E, and G are used to define information specific to each monitoring project. This includes Blueprint elements 4-14 for each of the monitoring projects. It is helpful that the technical elements of each monitoring project are separated into individual Appendices but presented using a consistent format that follows the structure of the Blueprint.

Any remaining comments that we believe would strengthen the CAMP are included in the checklist below. While our suggestions are not required to meet Blueprint criteria, we hope they are useful and will be considered by the District when further refining this living document.

<b>MONITORING PLAN ELEMENT 1: FORM COMMUNITY PARTNERSHIPS</b>	
<b>CRITERIA</b>	<b>✓</b>
Identifies community steering committee members and their affiliation.	✓
Documents community steering committee meeting information: <ul style="list-style-type: none"> <li>• Date of first meeting.</li> <li>• Date, time, number of attendees for all meetings that have been held.</li> <li>• Frequency of future meetings and required attendees.</li> </ul>	✓
Details level of community involvement in planning and resources made available to accommodate community's desired level of involvement throughout implementation.	✓
Provides link to air district webpage dedicated to community air monitoring and documents what will be posted on this webpage.	✓
Identifies dedicated contact person to address questions on the community-specific air monitoring plan.	✓
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<b>Comments:</b> - <i>The District's Richmond-San Pablo AB 617 website is a great resource for those seeking Steering Committee meeting information (including agendas, presentations, dates/times, notes).</i> - <i>Time of meetings is not explicitly included in Appendix A but can be easily located on the District's website.</i> - <i>Dedicated contact person for all monitoring projects identified. (<a href="mailto:AB617info@baaaqmd.gov">AB617info@baaaqmd.gov</a>)</i>	

<b>MONITORING PLAN ELEMENT 2: STATE THE COMMUNITY-SPECIFIC PURPOSE FOR AIR MONITORING</b>	
<b>CRITERIA</b>	<b>✓</b>
Identifies the community-specific air monitoring need(s).	<input checked="" type="checkbox"/>
Provides background information on how the need was discovered.	<input checked="" type="checkbox"/>
Documents relevant information from previous, ongoing, and proposed air monitoring and identifies gaps that this community air monitoring will address.	<input checked="" type="checkbox"/>
Explores alternative approaches to investigating and addressing the air quality monitoring need(s).	<input checked="" type="checkbox"/>
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>- <i>This element’s criteria are satisfied across a number of chapters. Chapter 1 sufficiently describes why community air monitoring is needed in Richmond-San Pablo. Chapter 3 lists extensive background information on existing monitoring data (PM<sub>2.5</sub>, air toxics), provides a good overview of existing sources, lists alternative approaches, and discusses ongoing monitoring. Concerns that were prioritized by the Steering Committee, along with gaps that monitoring should address, are highlighted in Chapter 4.</i></li> <li>- <i>Chapter 3 provides good context for PM<sub>2.5</sub> measurements by comparing to EPA health-based standards.</i></li> <li>- <i>Suggest separating wind roses into panels to better display the seasonal variability discussed in the preceding paragraph (end of Chapter 3).</i></li> </ul>	

<b>MONITORING PLAN ELEMENT 3: IDENTIFY SCOPE OF ACTIONS</b>	
<b>CRITERIA</b>	✓
Defines action(s) that air monitoring aims to support.	<input checked="" type="checkbox"/>
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<b>Comments:</b> <i>- Actions that were prioritized by the steering committee are highlighted within the “data to support other uses” section in Chapter 4.</i>	

<b>MONITORING PLAN ELEMENT 4: DEFINE AIR MONITORING OBJECTIVES</b>	
<b>CRITERIA</b>	✓
States the air monitoring objective(s) that will address the stated community-specific purpose for air monitoring.	<input checked="" type="checkbox"/>
Specifies the community air monitoring design: <ul style="list-style-type: none"> <li>• Type(s) of data needed.</li> <li>• Measurements to be made.</li> <li>• Duration of monitoring.</li> </ul>	<input checked="" type="checkbox"/>
Defines other information necessary to address objective(s), such as: <ul style="list-style-type: none"> <li>• Supporting measurements (e.g., meteorology).</li> <li>• Action limits, threshold levels, regulatory information.</li> <li>• Data sources to be accessed and used.</li> </ul>	<input checked="" type="checkbox"/>
Includes reference information and materials (e.g., maps, diagrams, previous studies).	<input checked="" type="checkbox"/>
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<b>Comments:</b> <i>- The beginning of Appendix G presents general objectives for the District’s air toxics project.</i> <i>- Air monitoring design criteria are introduced in “Define Air Monitoring Objectives”, with more details provided in “Work Plan for Field Measurements” to fulfill the criteria.</i>	

<b>MONITORING PLAN ELEMENT 5: ESTABLISH ROLES AND RESPONSIBILITIES</b>	
<b>CRITERIA</b>	✓
Identifies all parties responsible for major aspects or phases of air monitoring (includes contractors).	☑
Clarifies group roles and interactions; specifies training requirements for individuals conducting air monitoring.	☑
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<b>Comments:</b> <i>- Appendix G "Roles and Responsibilities" clearly defines roles and responsibilities (including training requirements).</i>	

<b>MONITORING PLAN ELEMENT 6: DEFINE DATA QUALITY OBJECTIVES</b>	
<b>CRITERIA</b>	✓
Sets performance and acceptance criteria for all data to be collected.	☑
Identifies precision, bias, accuracy, sensitivity, and data completeness needs.	☑
Defines temporal and spatial representativeness.	☑
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<b>Comments:</b> <i>- It will be useful to be able to reference the AMSP Quality Assurance Project Plan (QAPP) when finalized for further information on how specific MQOs were determined.</i>	

<b>MONITORING PLAN ELEMENT 7: SELECT MONITORING METHODS AND EQUIPMENT</b>	
<b>CRITERIA</b>	<b>✓</b>
Identifies and describes method(s) and equipment selected (e.g., make, model, characteristics).	<input checked="" type="checkbox"/>
Justifies suitability of the method to meet the level of action required by monitoring objective.	<input checked="" type="checkbox"/>
Provides field and lab Standard Operating Procedures that will be followed.	<input checked="" type="checkbox"/>
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<b>Comments:</b>  <i>- Table G2 provides condensed information on instrumentation and parameters. The “Monitoring Methods and Equipment” section describes how these instruments are suitable to meet monitoring objectives.</i>	

<b>MONITORING PLAN ELEMENT 8: DETERMINE MONITORING AREAS</b>	
<b>CRITERIA</b>	<b>✓</b>
Indicates where monitoring will be conducted within the community.	<input checked="" type="checkbox"/>
Describes rationale and considerations for each monitoring area.	<input checked="" type="checkbox"/>
Details location characteristics (e.g., meteorology, sources, land use) and important logistical details (e.g., site access, security, power availability).	<input checked="" type="checkbox"/>
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<b>Comments:</b>  <i>- The map (Figure G1) is helpful to highlight screening area along with sources of interest identified by the Steering Committee.</i>	

<b>MONITORING PLAN ELEMENT 9: DEVELOP QUALITY CONTROL PROCEDURES</b>	
<b>CRITERIA</b>	<b>✓</b>
Specifies quality control activities for each type of measurement and the frequency at which they should be conducted – this includes, if applicable: <ul style="list-style-type: none"> <li>• Reference materials.</li> <li>• Calibration.</li> <li>• Ongoing quality control measures (e.g., zero point, span point, one point).</li> <li>• Blanks.</li> <li>• Spikes.</li> <li>• Duplicates/collocation.</li> <li>• Audits.</li> </ul>	<input checked="" type="checkbox"/>
Details process to follow when control limits are exceeded.	<input checked="" type="checkbox"/>
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<b>Comments:</b> <i>- Table G4 is helpful to consolidate instrument parameters and general QC check information.</i> <i>- This section points to instrument SOPs and the ASMP QAPP to define QC checks and acceptance criteria, which is sufficient to meet criteria within this Blueprint section. However, these documents (when finalized) should include detailed QC procedures to more thoroughly define QC activities and verify instruments adhere to MQOs.</i>	

<b>MONITORING PLAN ELEMENT 10: DESCRIBE DATA MANAGEMENT</b>	
<b>CRITERIA</b>	✓
Describes the data management system by identifying all of the following: <ul style="list-style-type: none"> <li>• Data descriptors.</li> <li>• Data storage attributes.</li> <li>• Data review and flagging procedures.</li> </ul>	✓
Identifies measures that will be taken to account for errors.	✓
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<b>Comments:</b> - Clear, concise description of data descriptors. Could include additional parameters that will be recorded in table format. - The District's "Data Management System_SOP" would be useful to review in conjunction with the CAMP.	

<b>MONITORING PLAN ELEMENT 11: PROVIDE WORK PLAN FOR CONDUCTING FIELD MEASUREMENTS</b>	
<b>CRITERIA</b>	✓
Identifies field procedures and materials to be utilized for conducting community air monitoring.	✓
Defines field communication and coordination steps.	✓
Provides timeline that denotes air monitoring duration, frequency, and milestones.	✓
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<b>Comments:</b> - This section details the frequency of air monitoring including how often the monitoring van will be deployed, time of day, number of passes needed, and representative time period for the study.	

<b>MONITORING PLAN ELEMENT 12: SPECIFY PROCESS FOR EVALUATING EFFECTIVENESS</b>	
<b>CRITERIA</b>	✓
Identifies evaluation process that will be utilized to ensure air monitoring objectives are being met, including number, frequency, and types of evaluations that will be conducted.	✓
Describes how issues will be documented and addressed.	✓
Defines an end point for air monitoring.	✓
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<b>Comments:</b> - <i>What is the process for amending the CAMP? What is the process to update the plan for phase 2 and how will changes to the CAMP be documented?</i>	

<b>MONITORING PLAN ELEMENT 13: ANALYZE AND INTERPRET DATA</b>	
<b>CRITERIA</b>	✓
Documents data preparation procedures that will be utilized.	✓
Describes how data will be analyzed to address the stated community-specific purpose for air monitoring.	✓
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<b>Comments:</b> - <i>This section mentions types of data analysis tools and visualizations that will be utilized. The District could consider including graphic examples of the types of summary figures that may be used to present information.</i> - <i>Suggest including plans to compare data to thresholds (background levels or health and facility limits).</i>	

<b>MONITORING PLAN ELEMENT 14: COMMUNICATE RESULTS TO SUPPORT ACTION</b>	
<b>CRITERIA</b>	<b>✓</b>
Establishes process for information sharing and communication with community throughout air monitoring.	<input checked="" type="checkbox"/>
Indicates how results will be delivered to affected community, stakeholders, CARB, and other decision-makers (e.g., content, frequency).	<input checked="" type="checkbox"/>
Details what information will be provided on district webpage (e.g., factsheets, notices, timeline, meeting agendas) and the frequency at which material and progress updates will be provided.	<input checked="" type="checkbox"/>
Defines the format and schedule of reports.	<input checked="" type="checkbox"/>
<b>Key Suggestions:</b> <i>None. All element criteria are fully covered.</i>	
<p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>- <i>The “Communicate Results” section provides information on the District’s partnership with the Monitoring Outreach Team to ensure project results are made accessible to the community.</i></li> <li>- <i>The District will provide updates on a quarterly basis, and a final report when monitoring concludes.</i></li> </ul>	